

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A distributor ~~characterized by~~ comprising:
an oscillator which outputs electromagnetic waves;
a first square waveguide to be connected to said oscillator;
a second square waveguide having a plurality of openings; and
a plurality of radiation waveguides arrayed in a widthwise direction perpendicular to tube axes,

wherein said first square waveguide and said second square waveguide communicate with each other through a communication hole formed in ~~one~~ a first narrow wall of each of said first square waveguide and said second square waveguide,

wherein said second square waveguide communicates with radiation waveguides through the plurality of openings, ~~and~~

wherein said first square waveguide comprises a first guide wall which projects from ~~the other~~ a second narrow wall toward the communication hole and guides the electromagnetic waves propagating in said first square waveguide toward the communication hole, and

wherein electromagnetic waves reflected by said first guide wall that travel in an opposite direction in said first square waveguide cancel the electromagnetic waves which are reflected by an end of said first square waveguide.

2. (Currently Amended) A distributor according to claim 1, ~~characterized in that~~
wherein said second square waveguide comprises a plurality of second guide walls which project from ~~said one~~ the first narrow wall of the second square waveguide toward each of the plurality of openings.

3. (Canceled)

4. (Currently Amended) A distributor according to claim ~~[[3]]~~ 1, ~~characterized in that~~
wherein

said first guide wall is arranged to oppose the communication hole, and

said end of said first square waveguide is arranged at a position away from said first guide wall by an integer multiple of substantially $1/2$ a tube wavelength of said first square waveguide.

5. (Currently Amended) A distributor according to claim 1, ~~characterized in that~~
wherein said second square waveguide comprises a conductive column which is arranged in the vicinity of the communication hole and extends between opposing wide walls.

6. (Currently Amended) A distributor according to claim 1, ~~characterized in that~~
wherein said first square waveguide and said second square waveguide have different relative dielectric constants.

7. (Currently Amended) A plasma processing system ~~characterized by~~ comprising:
a stage to place a target object thereon;
a processing vessel to accommodate said stage;
an antenna assembly having a plurality of radiation waveguides with slots; and
a distributor which distributes electromagnetic waves to said radiation waveguides,
wherein said radiation waveguides are arrayed in a widthwise direction perpendicular to the tube axes with respect to said processing vessel,

said distributor comprises

an oscillator which outputs the electromagnetic waves,

a first square waveguide to be connected to said oscillator, and

a second square waveguide to be connected to one end of each of said radiation waveguides through a plurality of openings formed therein,

wherein said first square waveguide and said second square waveguide communicate with each other through a communication hole formed in ~~one~~ a first narrow wall of each of said first square waveguide and said second square waveguide,

wherein said first square waveguide comprises a first guide wall which projects from ~~the other~~ a second narrow wall toward the communication hole and guides the electromagnetic waves propagating in said first square waveguide toward the communication hole, and

wherein said second square waveguide comprises a plurality of second guide walls which project from said ~~one~~ first narrow wall of the second square waveguide toward each of the plurality of openings, and

wherein electromagnetic waves reflected by said first guide wall that travel in an opposite direction in said first square waveguide cancels the electromagnetic waves which are reflected by an end of said first square waveguide.

8. (Currently Amended) A plasma processing system according to claim 7, ~~characterized in that~~ wherein each of said radiation waveguides has a standing wave driving slot, on the other end of a side wall thereof, to be driven by standing waves which are formed of traveling waves traveling from said one end toward said other end and reflected waves reflected by said other end toward said one end.

9. (Currently Amended) A plasma processing system according to claim 8, ~~characterized in that~~ wherein said standing wave driving slot is formed at a position away from said other end toward said one end by a natural number multiple of substantially $1/2$ a tube wavelength of a corresponding one of said radiation waveguides.

10. (Currently Amended) A plasma processing system according to claim 8, ~~characterized in that~~ wherein each of said radiation waveguides comprises a reflecting member which is arranged on a side of said one end, when seen from said standing wave driving slot, and reflects part of the traveling waves toward said one end to cancel the reflected waves which are reflected by said other end or said standing wave driving slot.

11. (Currently Amended) A plasma processing system according to claim 10, ~~characterized in that~~ wherein said reflecting member is arranged at a predetermined position between a center position of said standing wave driving slot and a position away from the center position toward said one end by substantially $3/2$ the tube wavelength of said corresponding one of said radiation waveguides.

12. (Currently Amended) A distributing method ~~characterized by~~ comprising:
~~the~~ a first step of introducing electromagnetic waves propagating in a first square waveguide into a second square waveguide through a communication hole formed in ~~one~~ a first narrow wall of each of the first square waveguide and the second square waveguide; and
~~the~~ a second step of distributing the electromagnetic waves introduced into the second square waveguide to a plurality of radiation waveguides arrayed in a widthwise direction perpendicular to ~~the~~ tube axes, through a plurality of openings formed in the second square waveguide,

wherein in the first step, the electromagnetic waves propagating in the first square waveguide are guided toward the communication hole by a guide wall which projects from ~~the other~~ a second narrow wall of the first square waveguide toward the communication hole, and

wherein electromagnetic waves reflected by said first guide wall that travel in an opposite direction in said first square waveguide cancels the electromagnetic waves which are reflected by an end of said first square waveguide.

13. (Currently Amended) A plasma processing method ~~characterized by~~ comprising:
~~the~~ a first step of introducing electromagnetic waves propagating in a first square waveguide into a second square waveguide through a communication hole formed in ~~one~~ a first narrow wall of each of the first square waveguide and the second square waveguide;
~~the~~ a second step of distributing the electromagnetic waves introduced into the second square waveguide to a plurality of radiation waveguides arrayed in a widthwise direction perpendicular to ~~the~~ tube axes, through a plurality of openings formed in the second square waveguide;
~~the~~ a third step of supplying the electromagnetic waves introduced into the radiation waveguides to a processing vessel through a slot formed in each of the radiation waveguides;
and

~~the~~ a fourth step of processing a target object placed in the processing vessel utilizing a plasma which is generated by the electromagnetic waves supplied to the processing vessel,

wherein in the first step, the electromagnetic waves propagating in the first square waveguide are guided toward the communication hole by a first guide wall which projects

from ~~the other~~ a second narrow wall of the first square waveguide toward the communication hole, and

wherein in the second step, the electromagnetic waves propagating in the second square waveguide are guided toward the opening by a plurality of second guide walls which project from said ~~one~~ first narrow wall of the second square waveguide toward each of the plurality of openings, and

wherein electromagnetic waves reflected by said first guide wall that travel in an opposite direction in said first square waveguide cancels the electromagnetic waves which are reflected by an end of said first square waveguide.

14. (Currently Amended) A process for fabricating an LCD, ~~characterized by~~ comprising:

~~the~~ a first step of introducing electromagnetic waves propagating in a first square waveguide into a second square waveguide through a communication hole formed in ~~one~~ a first narrow wall of each of the first square waveguide and the second square waveguide;

~~the~~ a second step of distributing the electromagnetic waves introduced into the second square waveguide to a plurality of radiation waveguides arrayed in a widthwise direction perpendicular to ~~the~~ tube axes, through a plurality of openings formed in the second square waveguide;

~~the~~ a third step of supplying the electromagnetic waves introduced into the radiation waveguides to a processing vessel through a slot formed in each of the radiation waveguides; and

~~the~~ a fourth step of subjecting a surface of an LCD substrate arranged in the processing vessel to a process such as etching, ashing, oxidation, nitridation, or CVD

utilizing a plasma which is generated by the electromagnetic waves supplied to the processing vessel,

wherein in the first step, the electromagnetic waves propagating in the first square waveguide are guided toward the communication hole by a first guide wall which projects from ~~the other~~ a second narrow wall of the first square waveguide toward the communication hole, and

wherein in the second step, the electromagnetic waves propagating in the second square waveguide are guided toward the opening by a plurality of second guide walls which project from said ~~one~~ first narrow wall of the second square waveguide toward each of the plurality of openings, and

wherein electromagnetic waves reflected by said first guide wall that travel in an opposite direction in said first square waveguide cancels the electromagnetic waves which are reflected by an end of said first square waveguide.

15. (Currently Amended) A plasma processing apparatus according to claim 7, ~~characterized by~~ further comprising ~~said~~ a plurality of oscillators.

16. (Currently Amended) A plasma processing apparatus according to claim 7, ~~characterized by~~ further comprising a plurality of microwave supply devices including said antenna assembly and said distributor.

17. (Currently Amended) A plasma processing apparatus according to claim 16, ~~characterized in that~~ wherein in two of the microwave supply devices, the other end of one of said radiation waveguides opposes that of the other of said radiation waveguides, and said oscillators interpose said radiation waveguides and are located on opposite sides.

18. (New) A distributor according to claim 1, wherein said second square waveguide is disposed in parallel with said first square waveguide.

19. (New) A distributor according to claim 1, wherein said first narrow wall of each of said first and said second waveguides is in parallel with an axis of each of said first and second square waveguides.